

In the Claims:

Please amend the claims as follows:

- A2
1. (canceled)
 2. (canceled)
 3. (canceled)
 4. (canceled)
 5. (canceled)
 6. (canceled)
 7. (canceled)
 8. (canceled)

 9. (original) A method for learning probabilistic relational models (PRM) having attribute uncertainty, comprising the steps of:
 - providing a parameter estimation task by:
 - inputting a relational schema that specifies a set of classes, having attributes associated with said classes and having relationships between objects in different classes;
 - providing a fully specified instance of said schema in the form of a training database; and
 - performing a structure learning task to extract an entire PRM solely from said training database.

 10. (original) The method of Claim 9, said structure learning task comprising the step of specifying which structures are candidate hypotheses.

 11. (original) The method of Claim 10, said structure learning task comprising the step of evaluating different candidate hypotheses relative to input data.

 12. (original) The method of Claim 11, said structure learning task comprising the step of searching hypothesis space for a structure having a high score.

A3 13. (canceled)

14. (canceled)

15. (canceled)

A3 16. (new) A method for analyzing a database, comprising:

inputting a relational schema of the database, the relational schema including a specification of a set of classes, attributes of the classes, and specifications of relationships between objects in different classes;

inputting a training database that includes a fully specified instance of the schema; and
generating from the training database and the relational schema a probabilistic relational model (PRM) including a dependency structure and a conditional probability distribution, the dependency structure including a plurality of nodes and directed edges, wherein each node represents a respective attribute of the classes, and each directed edge from a first one of the plurality of nodes to a second one of the plurality of nodes represents dependency of an attribute represented by the second node on an attribute represented by the first node, the attribute of the first node being a parent of the attribute of the second node, and the conditional probability distribution specifying for each attribute, a distribution over possible values of the attribute given all possible values of each parent.

17. (new) The method of claim 16, wherein generating the PRM includes evaluating a plurality of candidate dependency structures, each candidate dependency structure including a plurality of hypotheses, and each hypothesis including a selected set of parents for each attribute.

18. (new) The method of Claim 17, wherein evaluating plurality of candidate dependency structures comprises:

assigning a respective score to each candidate dependency structure using Bayesian model selection, wherein each score is a function of a prior probability of the structure and a probability of attribute values given the structure; and

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selecting a candidate dependency structure having a score that is consistent with selected criteria.
